

05/04/2015

Watering System



The Watering System waters our plants automatically



A Sprinkler Head - fixed height type

There are several kinds of sprinkler heads used in the system; some are at fixed heights to deliver water above the plants, some pop-up when activated. Each head can be modified for watering direction, angle and strength.

Rain Bird Controllers

There are 2 systems at Cypress Point. One has a controller in Building 'A' Sprinkler Room. The other has a controller in Building 'C' Sprinkler Room. The key to open the door is the same as the Electrical Room.



The Sprinkler Room Door in Building 'C'

Both controllers are "Rain Bird" models, but different types. Building 'A' controller is model ESP 16LX plus, building 'C' is model E-9c. Paper manuals for both controllers are next to them in the sprinkler rooms. Electronic versions can be found at the 'Rain Bird' support website, and copies are on the Cypress website. It is recommended to study these manuals before any changes are attempted, since it is not 'obvious' how to operate these controllers.



The Rain Bird controller in Building 'C'.

Current Settings for Building 'A' Controller

This has a single Custom cycle, Program 'A'.
The program start time is 1AM.

Watering Days:

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Off	On	Off	On	Off	Off	On

Station On Times

Station	1	2	3	4	5	6	7	8	9	10	11	12	13
Minutes	20	15	23	15	15	45	15	15	15	15	15	35	12

Stations 14 to 16 are unused, and have Minutes set to zero.

There is a hand drawn table describing the stations next to the controller.
E.g. Station 12 is described as "West Middle Misters".

This area covers the central flower bed, and area under the large trees next to Building 'B' parking lot. *TBD. Perhaps an area map would be better!*

Current Settings for Building 'C' Controller

This has a single Custom cycle, Program 'A'.
The program start time is 1AM.

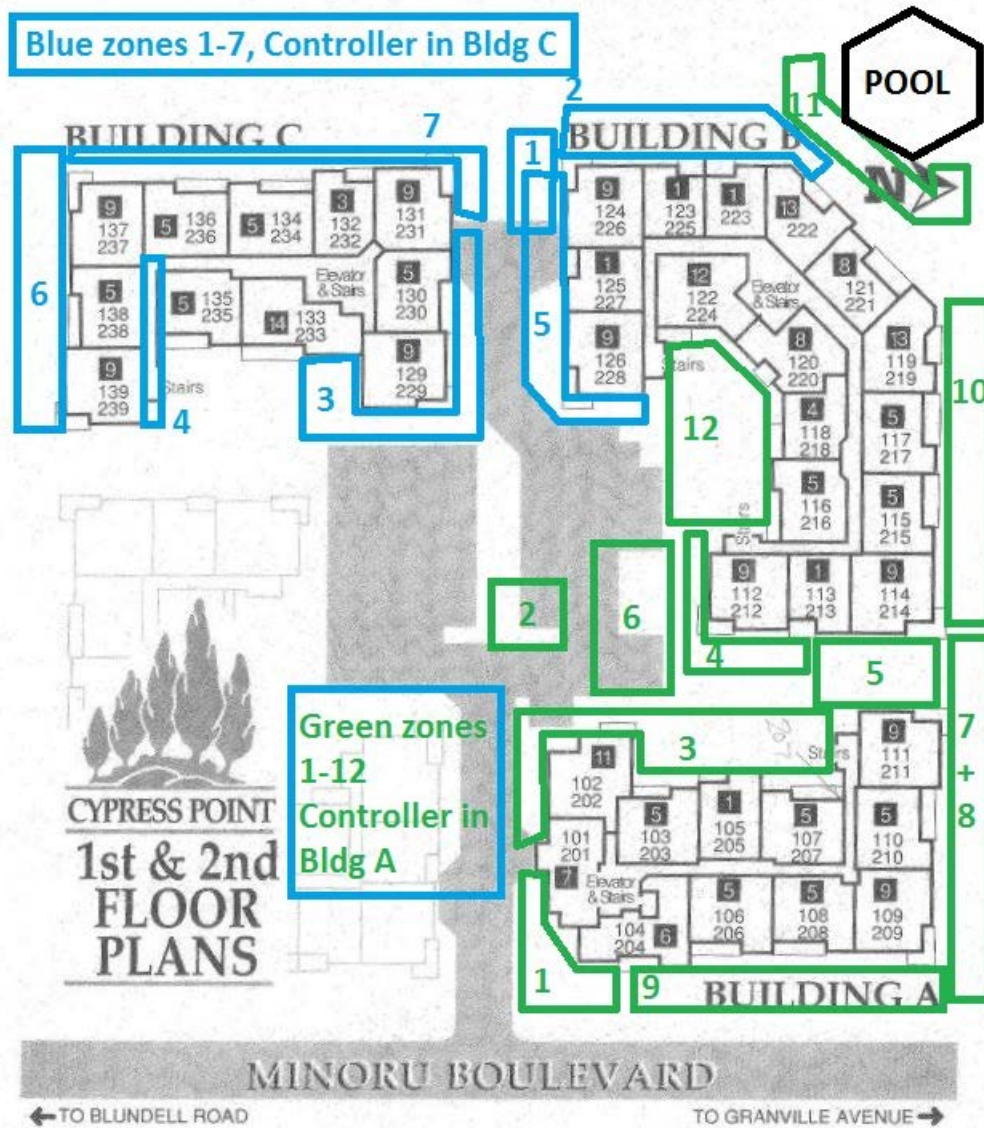
Watering Days:

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Off	On	Off	On	Off	Off	On

Station On Times

Station	1	2	3	4	5	6	7	8	9
Minutes	18	30	30	15	40	30	15	0	0

Stations 8 and 9 are unused, and have Minutes set to zero.



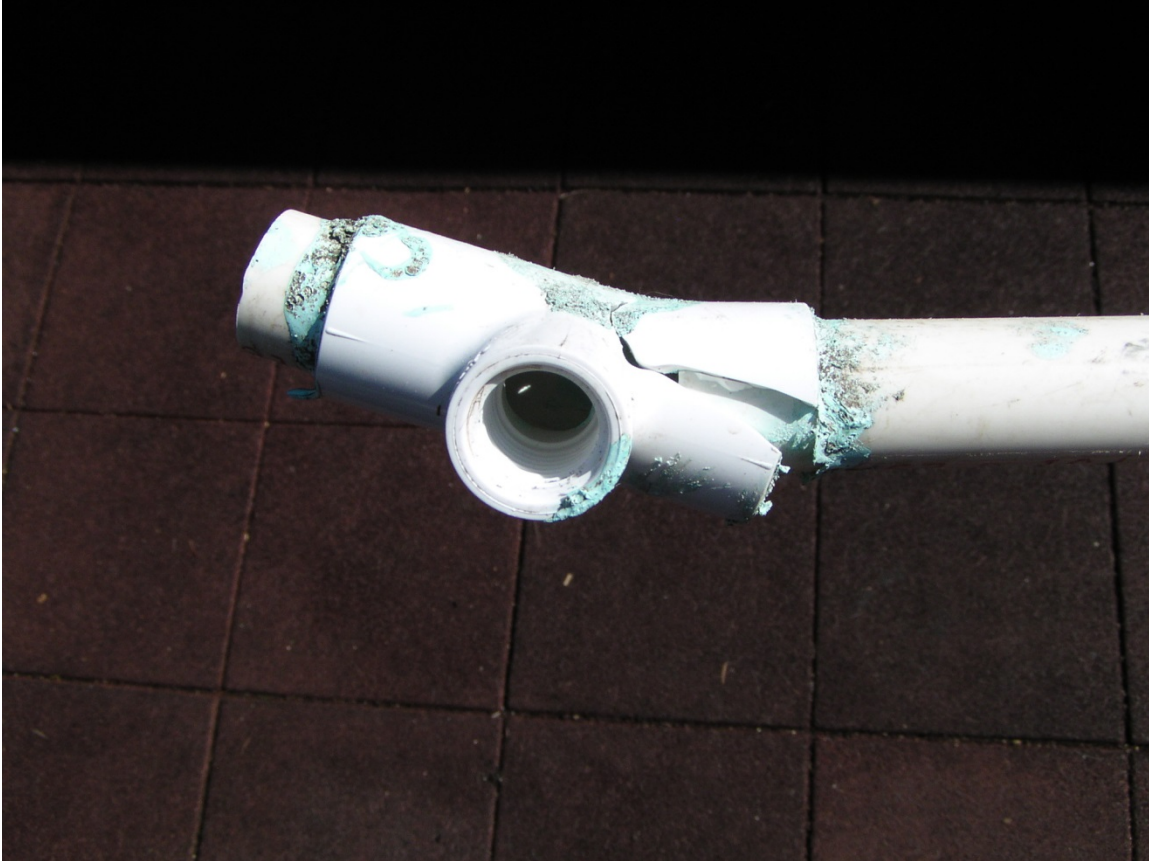
How to fix a broken pipe

The watering system pipes meander just under the surface of the soil, and under roadways through conduit. Quite where they lay is a mystery, and seems to defy logic. They are also made of PVC plastic and are quite brittle. So during gardening or ground maintenance it is easy to break these pipes. It is usually quite obvious to see where they are broken; a fountain of water erupts from the ground when the watering system is on. The good news is the pipes and junctions are very cheap. The repair shown here cost \$22 in parts, which included \$6 for glue (partly used).



A sliced pipe caused by a glancing blow with a spade

Broken Joint



Pipe joints are cheap, both in cost and strength.

The Repair, in position and glued.



The repaired section (topmost pipe), using new elbow, 'T' and straight joints.

Pipe and joints, $\frac{3}{4}$ " PVC.

Glue used: Oatey Medium Grey PVC Cement.

Leave the glue to set for 24 hours before pressure testing.

Watering system zones can be activated manually from the controllers, see next section or study the manual to find out how.

How to Operate the E-9c (Building C)

Manually Operate Individual Stations:

1. Rotate dial to the MANUAL STATION(S) - The first station number is displayed
2. Press ENTER (the curly arrow), to advance station number to desired station.
3. Press '+' or '-', to set the desired running time
4. Press ENTER to 'enter' the running time. (Station number advances)
5. Turn dial to AUTO - controller runs all stations setup as above.

Run Whole Program Manually

1. Rotate dial to MANUAL CYCLE
2. Press ABC to select the program to run (can be 3, we only have 1 ATP)
3. Press ENTER
4. Turn dial to AUTO to start program.

Run a Test Program

1. Rotate dial to TEST
2. Press '+' or '-', to set minutes each station will run
3. Press ENTER
4. Rotate dial to AUTO - each station should run in sequence 1, 2, 3 etc.

How to Operate the ESP-LXi (Building A)

Manually Operate Individual Stations:

1. Slide switch to select which bank of stations (1-6 or 7-12)
2. Rotate dial to station number
3. Press PGM until station run time is displayed, change using arrows
4. Press MAN START/ADV to operate station
5. [Repeat 2-4 if other station are required to run]
6. Turn to AUTO to run station

Run Whole Program Manually

1. Rotate dial to AUTO
2. Press PGM to select the program to run
3. Press MAN START/ADV starts the program
4. Turn dial to OFF for 3 seconds to cancel.

Run a Test Program

1. Rotate dial to TEST/STATION DELAY to view run time
2. Press up and down arrows, to set minutes each station will run
3. Press MAN START/ADV to start the test
4. Rotate dial to AUTO - to display the run time remaining for the current station.